



UNITED STATES DEPARTMENT OF COMMERCE  
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SM

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/147,428	12/22/98	SHIOTA	Y 2839-0065-3-

IM22/0108  
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EXAMINER	
CINTINS, I	
ART UNIT	PAPER NUMBER

1724 12

DATE MAILED:  
01/08/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

<b>Office Action Summary</b>	Application No. <b>09/147,428</b>	Applicant(s) <b>Shiota et al.</b>
	Examiner <b>Ivars C. Cintins</b>	Group Art Unit <b>1724</b>

Responsive to communication(s) filed on Dec 15, 2000

This action is **FINAL**.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

#### Disposition of Claims

Claim(s) 1, 2, 6-10, 13-15, and 19-30 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1, 2, 6-10, 13-15, and 19-30 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claims \_\_\_\_\_ are subject to restriction or election requirement.

#### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. § 119

Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

#### Attachment(s)

Notice of References Cited, PTO-892

Information Disclosure Statement(s), PTO-1449, Paper No(s). 8

Interview Summary, PTO-413

Notice of Draftsperson's Patent Drawing Review, PTO-948

Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Prosecution before the Primary Examiner is hereby reopened. The final rejection dated July 18, 2000 is withdrawn, and the amendment filed December 15, 2000 has been entered. Accordingly, claims 1, 2, 6-10, 13-15 and 19-30 remain pending in this application.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 6, 13, 15, 29 and 30 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Gentry (U.S. Patent No. 5,601,797). See col. 6, lines 10-16; and Fig. 2.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gentry. The reference discloses the

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claimed invention with the exception of the size of the particles in the pressure layer. However, the exact size of the metal particles (i.e. alumina balls) in the reference system is not seen to materially affect the overall operation of this reference system, or to produce any new and unexpected result; and is therefore deemed to be an obvious matter of choice in design, insufficient to patentably distinguish the claims. Applicant should note that Gentry clearly discloses (see col. 6, line 15) that such alumina balls can have "varying diameters".

Claims 1, 2, 8-10 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gentry in view of published European Patent Application No. 0 636 399. Gentry discloses the claimed invention with the exception of the recited vertical partition. Published European Patent Application No. 0 636 399 discloses an apparatus comprising a particulate bed, and teaches the use of a vertical partition (see page 2, right column, lines 25-33) in order to minimize surface movements of the particulate material in the bed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the vertical partition of published European Patent Application No. 0 636 399 for the "holddown grid" of Gentry (i.e. element 108), since this secondary reference vertical partition is capable of minimizing surface movement of particulate material in

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substantially the same manner as the holddown grid of the primary reference, to produce substantially the same results. The exact height (claim 9) and cross-sectional area (claim 8) of this vertical partition are not seen to materially affect the overall operation of the reference device, or to produce any new and unexpected result; and are therefore deemed to be obvious matters of choice in design, insufficient to patentably distinguish these claims.

Claims 20, 23, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/13463 in view of Gentry. WO 96/13463 discloses a wet air oxidation unit comprising a catalytic bed reactor. Accordingly, this reference discloses the claimed invention with the exception of the specific type of catalytic unit employed. Gentry discloses a catalytic unit of the type recited; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the catalytic unit of Gentry for the catalytic unit of WO 96/13463, since this secondary reference catalytic unit is capable of promoting catalytic oxidation of contaminants in a fluid in substantially the same manner as the catalytic unit of the primary reference, to produce substantially the same results.

Claims 21, 22, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/13463 in view of Gentry as

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applied above, and further in view of published European Patent Application No. 0 636 399. The modified primary reference discloses the claimed invention with the exception of the recited vertical partition. Published European Patent Application No. 0 636 399 discloses using a vertical partition in a particulate bed in order to minimize surface movements of the particles in this bed; and it would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the vertical partition of published European Application No. 0 636 399 for the "holddown grid" of the modified primary reference, since this vertical partition is capable of minimizing surface movement of particulate material in substantially the same manner as the holddown grid of the modified primary reference, to produce substantially the same results.

Djafer et al (U.S. Patent No. 5,972,226) is an English language equivalent of WO 96/13463.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (703) 308-3840. The examiner can normally be reached on Monday through Friday from 9:30 AM to 6:00 PM.

The fax phone numbers for this art unit are: (703) 305-3599 for "Official" faxes after Final Rejection; (703) 305-7718 for

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all other "Official" faxes; and (703) 305-3602 for "Draft" and other "Unofficial" faxes.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

*Ivars Cintins*  
**Ivars C. Cintins**  
**Primary Examiner**  
**Art Unit 1724**

I. Cintins  
January 6, 2001